

Are online communities delivering? The case of C3NET

Hebron A. Mwakalinga

Defining ICTs

ICT stands for *information and communication technology*; from the wording, any medium that handles information fits in the domain of technology-supported information exchange. However, in the context of this paper the definition is restricted to electronic information with computer technology at the epicentre, i.e. the computer and peripherals, the Internet and mobile phones.

The worldwide reach of the Internet

There is an old saying that two things are certain: tax and death; but nowadays we might include in this saying tax, death and the Internet. The number of people using the Internet worldwide is increasing exponentially: between 2000 and 2004 the growth rate is estimated at 125%. It is now estimated that 812 million people have access to the Internet, which is 12.7% of the total world population. Increase in connectivity laterally has been coupled with a corresponding increase in uses and information handled.¹ These developments have also witnessed the fall in the acquisition and operating costs for both Internet services and hardware.

Table No. 1 Internet Access Worldwide

WORLD INTERNET USAGE AND POPULATION STATISTICS						
World Regions	Population (2004 Est.)	Population % of World	Internet Usage, Latest Data	Usage Growth 2000-2004	Penetration (% Population)	World Users %
Africa	893,197,200	14.00%	12,937,100	186.60%	1.40%	1.60%
Asia	3,607,499,800	56.50%	257,898,314	125.60%	7.10%	31.70%
Europe	730,894,078	11.40%	230,886,424	124.00%	31.60%	28.40%
Middle East	258,993,600	4.10%	17,325,900	227.80%	6.70%	2.10%
North America	325,246,100	5.10%	222,165,659	105.50%	68.30%	27.30%
Latin America/Caribbean	541,775,800	8.50%	55,930,974	209.50%	10.30%	6.90%
Oceania / Australia	32,540,909	0.50%	15,787,221	107.20%	48.50%	1.90%
WORLD TOTAL	6,390,147,487	100.00%	812,931,592	125.20%	12.70%	100.00%

Source: <http://www.internetworldstats.com/stats2.htm>

One phenomenon that has been of growing concern among development experts has been the digital divide between poor countries and rich countries. ICTs are an acknowledged vital input into development processes, and ample cases illustrate how the use of ICTs can help achieve more effective results. The use of ICTs in enhancing access to market information, to knowledge on more effective crop production methods and to educational content are just a few well-known illustrations.²

As functionalities of the Internet grow, discussion groups have emerged as valuable platforms for people with a common agenda to share knowledge. Discussion groups or online forums are either online or offline. Online forums are web-based, in which case a member participates by opening the respective web page and contributing to a thread. Off-line forums are dependent on e-mail. Community Content Creation Network (C3NET) is the former type of network but in fact works predominantly as if it were the latter. One can presume that this is due to the fact that the majority of its members are based in developing countries, where email is generally easier to access than the Internet.³

Background of C3NET

Following the South-South Exchange Travelling Workshop in the state of Pondicherry India in 2002, participants from Africa, Asia, Latin America, Europe and North America, were inspired by what they saw on how ICTs are being embedded in rural development processes.⁴ They realised that they needed to extend the exchange process beyond the travelling workshop and hence initiated a mailing list on which they could continue thematic discussions on ICTs as a tool for development, particularly in rural communities. A number of themes emerged on everyday issues they encountered in their work, including gender empowerment, sustainability of ICT initiatives in rural settings, integration of ICTs in development programmes, etc. This resulted in C3NET, hosted on the development exchange platform Dgroups.⁵ The community quickly expanded, joining a wide variety of development practitioners and resource people from around the globe. To date it includes 200 livelihood practitioners most of whom live and work in developing countries. Furthermore, the community provides its members with an appropriate platform to express priorities in terms of future development initiatives.

Discussion Themes

Initially, the forum moderators thought that there was a need to serialize topics for discussion based on past online and offline exchanges; however it turned out that the forum tends to find its own equilibrium and that homogeneity is more conspicuous on a higher level. As such, there is a tendency for spontaneous, short-lived sub-communities emerging and atrophying around on particular theme. C3NET over the period of its existence has discussed a number of subjects, including the following:

Language barriers and ICT-solutions

Analysts in ICT development view language as one of the barriers limiting access to Internet by rural communities. Whilst the Internet is dominated by the English language, the barrier is narrowing, as one example during the discussion cited the entry of a Kiswahili interface on Google search engine.⁶ Arguments were made as to whether the world should struggle to be multi- or mono-lingual. In this context, ICTs can be viewed as a double-edged sword: while they contribute to the decimation of minority languages, they can also be used to protect the very same. Two strands of efforts are noted in particular: Information technology looking for a space in local communities and the converse, communities looking for space in the digital world. Open source software is a possible entry into virtual space by less-mainstream languages, as interfaces can be adapted and thus translated to meet local needs.

Internet-enabled mobile phones

Recent statistics show that mobile phones have permeated rural communities at an unanticipated rate, providing opportunities for the poor to get integrated in the e-World. Current communication capabilities of mobile phones are no longer limited to voice, and SMS (standard messaging system), Internet browsing, video and photography are all part of the new realm of possibilities via mobile phones. Forum members shared information on and experiences with Wireless Access Protocol (WAP) as a tool to connect millions of people to the Internet. Reference was made to the successful Manobi Project in Senegal where WAP has been deployed as a tool for farmer information services.⁷ A major limitation with this technology however is that in order for one to access the Internet by WAP, mobile telephone companies have to provide WAP-compliant services and Internet web pages need to be reformatted into this protocol, neither of which are common.

Closing the gap through community radio

One of the subjects that continues to draw the interest of many members is community radio. This seems to be a popular tool for reaching people in poor, rural areas where access to technology is severely restricted. In this context, the combination of radio and Internet, for example, can provide a solution. Members shared their experiences and knowledge on different technologies, approaches and uses of community radio for development purposes, on policy matters and investment costs, and shared evaluation outcomes on community radio projects worldwide.

"We are very pleased to inform you that our NGO is now using radio as a tool in rural areas of upper-nkam division in Cameroon, Central Africa. The project was funded by GKP and we will be very pleased to share the achievements and the problems encountered with you."
Sylvie Siyam, Protégé QV,
Cameroon

Lack of infrastructure in rural areas

This discussion involved two threads. First, the issue of *powering rural ICTs*: where infrastructure is scarce or lacking altogether, the diffusion of ICTs in needy areas is severely restricted. Finding alternative sources to grid electricity and sustainable sources of energy for rural ICT-projects is a major challenge. Nonetheless, solutions include solar energy and bio-gas, which were shared in the community based on the cases of refugee camps in Western Tanzania and a school in South Africa.

Second, the issue of *rural connectivity* – or lack thereof. One of the major challenges that lead to sub-optimal participation by potential stakeholders in development, is their lack of connectivity due to financial restrictions, lack of connectivity – i.e. access to any Internet services, and lack of technological capacity. The forum explored various alternative connectivity options for rural areas including VSAT and Internet mobile access point (IMAP), and explored different funding requirements and opportunities. It appeared that huge differences in costs exist within the African continent, even between neighbour countries Tanzania and Uganda, without clear reasons why this is the case.

Planning and sustainability of information centres

A recurring and popular topic continues to be the sustainability of ICTs for development in general, and of telecentres in particular. While the bottom line has been information and knowledge management and exchange, technology and scale matters, and many initiatives have ended up as telecentres, focusing primarily on access, instead of information centers/kiosk, focusing on relevant content. This is a serious pitfall in terms of the sustainability of initiatives. Members highlighted that sustainability encompasses social, economical, technical and financial facets, and that critical success factors for

telecentres/information centres include private-public-partnerships (PPP) and gender inclusion. The community observed that at present there is no single model for a successful telecentre that could be applied worldwide, as the viability is situational and location-specific.

Open source as a viable alternative for development

Of late, the acquisition cost of computer hardware has been going down, but the cost of application software remains prohibitive for most users in poor countries. Luckily there is a worldwide movement to develop alternative applications and operating systems. The forum exchanged information surrounding open source software, including operating systems, office applications and programming tools. Members shared knowledge on various applications including office suites, graphics, project management tools, web content management and others. All in all, the community sends out a clear signal that there is a lot of interest and scope for this type of non-proprietary software in the development context.

Volunteerism and local ownership

One of the success factors for a rural telecentre is local ownership and demand-responsiveness. In some countries, notably India, volunteerism particularly by women has been found to work effectively in managing the centres. Volunteerism is less practised in other countries and as a result it is difficult to get dedicated/committed service from volunteers. Members shared their experiences and agreed that the phenomenon of managing rural ICTs through volunteers has to consider socio-cultural values. For instance, in certain countries there is less 'sense of community', which restricts peoples' willingness to commit to their community 'for free'. However, a positive example of the effect of volunteerism was cited based on one village's experience in involving women as volunteers in the local telecentre. Thanks to their activities in telecentres, their 'action-radius' increased and they were suddenly responsible for activities beyond the walls of the household. This enhanced the women-volunteers' self-esteem, and improved the gender-awareness in several villages.

Other interesting threads included the mitigation of the spread of HIV/AIDS, intellectual property rights, inclusive ICT-policies, content with market value, action learning, open access, etc., all related to the use of ICTs for development purposes.

First HIV/Aids Comic CD ROM Launched: the CD in comic form titled 'AIDS The Ultimate Killer' tells the story of two friends who discover the deadly effects of HIV/AIDS and decide to tell others about it. Their story is told, using friendly images that appeal to the young audience for whom it is intended.
Ahiabenu, Kwami II, Ghana

Success factors for online forums

A comparison between C3NET and the Tanzanian www.e-thinktank.tz and www.swopnet.org shows that national forums are on the whole more dynamic than the international community of C3NET. This could lead one to believe that the more people interact face-to-face, the higher the level of online community activity. This is supported by the sudden burst of activity experienced after or just before a community workshop. Other success factors include:

Openness

Where the context of topics is common to all participants, discussion is more localised and thus more relevant to participants. They know they are in a 'safe' environment, and can thus freely express experiences and ways by which to tackle these. Both in national and

international forums, it is evident that where a stated common interest is discussed, people will feel less inhibited to discuss openly about it, as they know that other community participants can relate to what they are sharing. Consequently, a national forum has a larger degree of openness than a internationally diverse one like C3NET.

Vent for opinion making

Historically, Tanzania is a country with limited freedom of press, experienced even by this very generation. National forums active in the country such as the ones mentioned above have provided a vent for public opinion making. People can discuss subject matters online, which would be difficult with other, more traditional and less anonymous media such as radio or newspapers.

Access to the Internet

Member profiles of the groups discussed here indicate that, whilst they have a significant rural interest, they are based mostly in urban areas. In other words, these members have access to Internet on almost 24/7 basis, many from their office environment; therefore, cost, access and skills are generally not restrictive factors for participants of these forums.⁸

C3NET, beyond the e –

One of the greatest indicators that befit the word ‘community’ in the name C3NET is demonstrated by the manner in which the community shares not only knowledge and information, but also support, sympathy and even resources. For instance, many of the C3NET members learnt about the Tsunami disaster through the posting on the forum by a member based in India. Many members voice their response to what they saw on TV, and condolences, financial and material pledges were made using the platform. This illustrates one of the key success factors of this community, namely the strong factor of *trust* between members.

Mr Arunagiri, a participant of the South-South Exchange Workshop (from Malaysia) came forward to help reconstruct one village following the tsunami disaster. The project manager responded on the community: “We are indeed grateful to OWSA staff for this timely help, for rehabilitation work in the information villages of Pondicherry.”

Subbiah Arunachalam, MSSRF, India

It has been demonstrated on numerous occasions that community members generally feel comfortable and secure within this forum, which enhances the willingness to share experiences, pose questions and learn from each other. It can comfortably be stated that the combination of people working in similar contexts and situations, in a friendly, moderated environment, with face-to-face meeting opportunities presented every year, contribute to the strong feeling of trust between C3NET members. This can definitely be considered to be one of the key successes in the community’s two-year existence.

How Useful Are Online Forums?

An evaluation report cited on the Internet sums up the usefulness of online discussions as follows:

...On the whole, the use of online discussions has been highly successful and participants believe that such discussions can be a viable alternative to face-to-face discussion groups. ...The scope of materials employed in online discussions (is)

*noticeably greater compared with the variety generally turned to in face-to-face discussions. ...When asked to compare the quality of online discussions with that in face-to-face discussions, students generally rated the quality of online discussions as better. Convenience and flexibility were among the key reasons for favouring online discussions.*⁹

It is difficult to get standard indicators rating the effectiveness of online forums. However, it suffices in the scope of this paper to mention two implicit denominators for evaluating online forums. First: the quantitative trend of members listed and second, the continuity of discussions threads.

C3NET has grown in size from less than 30 members in January 2003 to 200 in just over two years, from various parts of globe, both North and South (notwithstanding its mission to facilitate exchange of information among members from countries in the South).

In January and February 2005, members of C3NET responded to three short questions: -

- How has C3NET helped you?
- What do you like about C3NET?
- What don't you like about C3NET?

A selection of member responses (sic.):

How Has C3NET Helped You?	What Do You Like?	What Don't You Like?
Sharing experience and knowledge on different ICT4D activities.	The focus on rural areas.	C3NET is not widely promoted to bring more people from the field.
By providing information.	Information sharing.	Not applicable (n/a)
Very much.	Collaboration.	People not responding.
The information sharing has made me to design some of the most sophisticated designs in communication to be the back bone of the country.	The day to day latest information in the respective fields.	(n/a)
Sharing information, announcing events, creating contacts.	Even being a virtual community, you know physically the people you were together at the South-South Exchange Workshop.	It looks like we never finish to address a topic and sort out any conclusions.
To network with people.	Its simplicity.	Its limited members' interaction.
Provides valuable ICT4D information.	Access to information.	(n/a)
Better use of ICT through radio broadcasting programs to reach rural women, exchange of information, announcement of events.	Manner of sharing experience with others on how to fight poverty in the communities, the friendly atmosphere and conviviality in the exchange.	C3NET language is only English, what about others languages.
Sharing information and knowledge with other professionals on line to widen my understanding as well as act as a bridge to transfer it to the community where I am working, to enhance development.	Sharing of information and knowledge.	Not many people are connected to the Internet, therefore many are still locked out.
I have been able to use the tool of research to print and provide internet information to members of my organisation.	Every bit of information	None so far

We have been able to learn and borrow good practises on how different ICTs are being applied in the generation and sharing of knowledge and information.	Diversity of participants and views expressed in the forum.	Too much information which sometimes do not get enough focus due to time.
I have been able to interact with different people in the group, got to useful information and also got to exchange views with others.	I find peoples' opinions about a particular topic. When there is something one is not sure about, they just throw it in the group up for discussion.	None so far.
Getting more awareness in the global ICT Developments.	The fact that it includes people from many different aspects of ICT.	I feel there is less sharing on individual project developments among the members.

Source: C3NET, Applications for the Information Management and Knowledge Sharing Workshop, Kampala, April 2005.

Challenges Facing Online Forums

Inconclusive Threads

Two divergent aspects arise here: one is that the forum operates on a principal of freedom of expression and hence people are free to post what they think is burning at that specific moment or they perceive it to be of value to other members. However on the other hand, too much of anything is detrimental and in this regard threads that are inconclusive, truncated and most importantly perhaps undocumented are dampening the output of the forum.

ICTs: Technological Convergence but Philosophically Divergent

Convergence of communication tools is changing the operating terrain significantly. It is common that electronic forums have surpassed the conventional channels when it comes to access of content by the general public. As a result, the general public in developing countries no longer constitutes a body of opinion where access to ICT is limited. Furthermore, few traditional communication media source knowledge from such (online) discussions, therefore restricting the reach of online discussed topics and even excluding the general public. This reaffirms the barrier between those with means to share in information and those without.

Trade-Off Between Freedom of Participation and Focus

There is a trade-off between freedom of participation and focus in a discussion thread, and there is a need to strike a balance between the two. Some forums are highly specific down to the discipline, delve into one very specialised subject, or have a particular defined goal, and whilst these forums generally have relatively small membership, they can maintain focused discussion threads. Where freedom to participate is less restricted, topics can dilute the focus of the forum and as a result the quality of discussion can diminish. Especially in such forums, and C3NET is of this type, it is a particular challenge for moderators to ensure an adequate balance is maintained, and important threads are pursued, followed-up and summarised.

Low Internet Penetration Rate

In Tanzania, for example, access to the Internet is estimated at 0.7%, whereas the average for Africa is 1.4% (the figure though is inflated by few smaller countries that have more than 10% penetration rate, e.g. Seychelles, Re-Union, and Mauritius), versus the world average of 14%. This low penetration rate is characteristic of many developing countries, where C3NET draws most of its members. This was also mentioned during the abovementioned member survey to be the main cause for some members, who are quite active during face-to-face

exchanges, to disappear off the radar as soon as their airplanes carrying them back home takes off.

Lack of Feedback

Most forums are one-way traffic in terms of how the forum helps the user, and if there is any feedback, the resulting output lacks visibility. A quick search on the Internet revealed that there are very few documented evaluations on the effectiveness of online forums. This can be attributed to the fact that recently forums are part and parcel of the Internet service by default and making an evaluation of such an all-encompassing domain seems a waste of time.

The Way Forward for C3NET

The success of the C3NET community is attributed to the common context in which members work and thus their mutual understanding of information needs; to the strong element of trust, built between members not only virtually but also through face-to-face exchanges; and by maintaining a delicate balance between openness and persistence in terms of guiding discussion threads. Whilst the latter does offer room for improvement, the international diversity of the community demands more flexibility in terms of determining the discussion context.

However, it is the challenges that one needs to look at in proposing the way forward and these are of two categories: those within the reach of C3NET and those beyond.

First, in order to blow more life into the forum, it is proposed that moderation is widened; currently two people are moderating C3NET, namely from Tanzania and Uganda. If more moderators could be added from other parts of the world, ICT-developments going on in their respective regions could be captured more effectively, for instance from the Indian sub-continent, Asia, Latin America, etc.

Second, networking with other forums has been quite productive because in a number of cases there are themes that are crosscutting in nature. As such, C3NET has benefited from other forums especially the Open Knowledge Network.¹⁰ Members need to be encouraged to inform local ICT networks in their respective countries to subscribe to the community as and when opportunities arise.

In conclusion, online forums can be a very useful complimentary source of knowledge. Many C3NET members concur that the community has helped them to improve their knowledge of ICTs, and has supported them in their development work. As the community grows and ICTs are increasingly maintained into other policy domains, it will be a challenge to ensure that the focus and momentum of the community are maintained.

Abstract

Knowledge management and sharing is an important input to development processes; however, in most developing countries access to knowledge resources is limited. The ubiquity of ICTs has opened the possibilities for better management and sharing of knowledge at institutional, community or individual level, while horizontally it has led to increased affinity between, and higher rate of diffusion amongst institutions, communities or individuals. On the other hand, there is a wide gap between rich and poor countries and

between urban and rural settings, which calls for concerted efforts to improve access to ICTs for the disadvantaged rural communities.

Internet-based (online) forums are one of many forms of knowledge exchange that have been greatly enhanced by accessibility to ICTs. Built on the spirit of South-South knowledge exchange workshops, Community Content Creation Network (C3NET) is one of such forum; it focuses on using ICTs to positively influence the development of rural livelihoods.

This paper takes inventory of the successes and challenges of C3NET as a means to exchange knowledge among its members. To a limited extent reference is made to research findings elsewhere and other forums.

While the author is a moderator of C3NET, the contents herein do not necessarily reflect the understanding and position of the community.

About the Author



Hebron Mwakalinga, based in Dar es Salaam, Tanzania, is Director of Business Information Services (www.bistanzania.com) and co-moderator for the international community of practice C3NET. He is also a consultant with Business Care Services, specialising in areas of information systems, rural development and marketing.

BIS Tanzania, Olympio Street, P.O. Box 78496. Dar es Salaam, Tanzania. Phone: +255 22 2150966, fax: +255 22 2150987, Email: bcstz@raha.com

Endnotes

¹ Loosely defined to include data.

² Bridges.org, for instance, has done a series of case studies illustrating this point. See www.bridges.org for more.

³ See www.dgroups.org/groups/c3net

⁴ *From Beedies to CDs*, IICD Research Brief January 2003

⁵ Dgroups (Development through Dialogue) is an online exchange platform and was specifically designed to facilitate development discussions. Designed and supported by a global partnership of development institutes including Bellanet, OneWorld International, Hivos and others, Dgroups is free of use for development practitioners in developing countries. For more, see www.dgroups.org.

⁶ Swahili is the most widely spoken African language, with more than 50 million speakers in East Africa and Central Africa, particularly in Tanzania (including Zanzibar) and Kenya. For more, see www.yale.edu/swahili.

⁷ For more, see <http://www.manobi.net/wsa2003>

⁸ Internet access in Tanzania costs about \$ 0.5 per hour in large cities and as high as \$2 in smaller towns.

⁹ For more, see <http://www.ascusc.org/jcmc/vol3/issue3/anderson.html>

¹⁰ Open Knowledge Network (OKN) is a community hosted by OneWorld International, supporting the development and exchange of local content using ICTs. For more, see www.openknowledge.net.